Help Topics
A User's Guide for "Botulism in Argentina"
Computer-based Case Study

Program Essentials

Program Formats
The case study is distributed in two formats: CD format and Internet Download format. With the Internet Download format, you have the option to download the *Complete Package* or the *Alternative Package*. The *Complete Package* includes all case study files. The *Alternative Package* includes only the minimum files needed to run the case study.

Minimum System Requirements
To undertake the case study, you will need the following computer hardware and software:
- Microsoft Windows 95, Windows 98, Windows NT® 4.0 with service pack 3 or higher, or Windows 2000
- Intel Pentium processor or equivalent
- Available hard disk space
  - Ŝ 32 MB if installing the case study from the CD or downloading the *Complete Package* from the Internet
  - Ŝ 15 MB if downloading the *Alternative Package* from the Internet
  (NOTE: If this amount of hard disk space is a problem, you can run the program directly from the CD. See "Frequently Asked Questions" for instructions.)
- 16 MB of memory
- 4x speed (NOTE: Only needed with CD format of program)
- Monitor resolution of 800 x 600 with 16-bit color
- Mouse

Installation Instructions for CD format
Insert the "Botulism in Argentina" CD into your CD drive. From your Windows desktop, choose *Start* and then *Run*. Type *D:\SETUP.EXE* (where D is the letter indicating your CD drive) in the box labeled *Open*, then click on the *OK* button. You should then follow the instructions on screen. At the end of the installation process you are given the option to "Launch the Program". Click on the check box provided if you wish to run the case study.

NOTE: If you are using Windows 95, Windows 98, or Windows NT® 4.0, you may be instructed to turn off or reboot your computer during the installation process. This step is necessary to update your Windows Installer and to complete the installation process.

Required Display Setting

If you attempt to install the program onto a computer with a monitor resolution and color setting less than the minimum requirements listed above, you will see the following message:

> **The screen resolution is not adequate for running**
> **Botulism in Argentina Computer-based Case Study.**

To check your settings and change them, if necessary:
1. Click on *Start* from your Windows desktop (located in the lower left-hand corner of your computer screen).
2. Point to *Settings*, and click on *Control Panel*.
3. In the *Control Panel* window, double-click on the *Display* icon.
4. In the *Display Properties* window, click on the *Settings* tab.
5. To change the resolution, move the slide bar under *Desktop or Screen Area* to the right (i.e., toward MORE) and increase the resolution to "800 by 600 pixels".
6. To change the color, select "16-bit color" in the pull-down menu under *Color Palette*. (NOTE: Depending on your operating system, the correct color palette might be listed as "16777216" or "High-Color".)

The above instructions will vary slightly depending on your operating system. After changing the display settings, you may be instructed to turn off or reboot your computer for the new settings to become active. To return your computer to its original settings, follow the same series of steps.

Running the Case Study

 Once the program is installed, you can run "Botulism in Argentina" by selecting the program icon now located on your Windows desktop. You can also run the program by selecting *Start* from your Windows desktop, then selecting *Programs*, *Case Studies*, and "Botulism in Argentina".

Uninstalling the Case Study

The "Botulism in Argentina" case study can be uninstalled by selecting *Start* from your Windows desktop, *Programs*, *Case Studies*, and then "Uninstall Botulism in Argentina". You should then follow the instructions on the screen. When prompted, select *Remove* the case study.

Program Structure and Files

Listed below are the files included in the CD and Internet Download formats of the case study. The minimum files to run the case study are indicated by an asterisk (i.e, the *Alternative Package*).

Files for the "Botulism in Argentina" Computer-based Case Study

Folder: CB_3058 *
    Files (8 files; 5 subfolders)
    Awiml32.dll
    botulism.exe
    budkey.u32
    Cover.u32
    README.TXT
    tMsControls.u32
    WELCOME.RTF
    winapi.u32

    Sub-Folder: xtras * (..CB_3058\xtras)
        Files (14)
        bmpview.x32
        dirtrans.32
        fileIO.x32
        gifimp.x32
        jpegimp.x32
        macedcmp.x32
        mix32.x32
        mixview.x32
        pictview.x32
        viewsvc.x32
        swadcmpr.x32
        swaread.x32
        tiffimp.x32
        wmfview.x32

    Sub-Folder: resources * (..CB_3058\resources)
        Files (14)
        botcert.pdf
        botcurve.pdf
        botflow.pdf
        botlinel.pdf
        botquest.pdf
        bottab2a.pdf
        bottab2b.pdf
        bottab3.pdf
        help.pdf
        help1.pdf
        help2.pdf
        help3.pdf
        help4.pdf
        iguide.pdf

Sub-Folder: epiinfo (..CB_3058\epiinfo)
    Files (5)
    eicomman.pdf
    ei6analy.pdf
    ei2000an.pdf
    botulism.rec
    botulism2000.mdb

Sub-Folder: audio (..CB_3058\audio)
    Files (22)
    EP1P1.swa
    EP1P2.swa
    EP1P3.swa
    EP2P1.swa
    EP2P2.swa
    EP2P3.swa
    EP2P4.swa
    EP2P5.swa
    EP2P6.swa
    EP3P1.swa
    EP3P2.swa
    EP3P3.swa
    EP3P4.swa
    EP4P1.swa
    EP4P2.swa
    EP5P1.swa
    EP5P2.swa
    EP5P3.swa
    EP5P4.swa
    EP5P5.swa
    EP6P1.swa
    EP6P2.swa

Sub-Folder: refs (..CB_3058\refs)
    Files (9)
    articles.PDF
    CCDM.PDF
    glossary.PDF
    handbook.PDF
    principl.PDF
    botfaq.pdf
    hughes.pdf
    mmwr.pdf
    stlouis.pdf

NOTE: In addition to the files listed above, CDs purchased from the Public Health Foundation will contain the following "Additional Training Materials" in the form of PDFs:
- *Foodborne Disease Outbreak Investigation: Epidemiologic Case Study for the Classroom*
- *Principles of Epidemiology Self-Study Course*

Tools and Features

References *
The References tool provides information about botulism and basic epidemiologic concepts. It includes excerpts from well-known manuscripts and books that students may wish to use in the future. It also includes a glossary of terms used in the case study.

The following items are available through the References tool:
- G Selected Text from Control of Communicable Diseases Manual (Chin, ed., 2000)
- G Selected Text from "Principles of Epidemiology" (CDC, 1992)
- G "Botulism: Frequently Asked Questions" (CDC, 2001)
- G Botulism in the United States, 1899-1996 (CDC Handbook, 1998)
- G Articles and Scientific Papers
- G Glossary

To view the references click on the References icon at the bottom of the case study screen. A colored notecard listing the references will appear. Click on the reference you wish to view. You will need the Adobe Acrobat Reader to view the references. A link is provided on the notecard to the Adobe website from which you can download the Reader.

After you select the desired reference, the Acrobat Reader will appear over the case study screen. The material to be reviewed will be displayed on the right side of the Acrobat Reader window. When available, a list of topics/subtopics will appear on the left side as bookmarks. For instructions on how to use the Acrobat Reader, see "Frequently Asked Questions"or view the help documentation available with your Acrobat Reader.

To return to the case study from a reference, close Acrobat Reader by clicking on the "x" in the uppermost right-hand corner of the window. You will see the colored notecard listing the references again. To return to the case study, click on "Back to Case Study" at the bottom right of the notecard or press the *Esc* key.

These references are also viewable directly in Acrobat Reader as PDF (Adobe Portable Document Format) files. The PDF files are located in the following folder: C:\CB_3058\refs.

* If you installed the *Alternative Package* of this case study, you will not be able to access the reference files. These files can be downloaded from the PHTN Case Studies website at http://www.phppo.cdc.gov/phtn/casestudies.
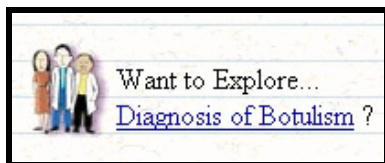
"Explore with an Expert" Vignettes

Periodically during the case study, you will be given the option to read an "Explore with an Expert" vignette. These vignettes, presented by an epidemiologist, laboratorian, or sanitarian, cover issues related but somewhat tangential to the "Botulism in Argentina" investigation. They are not critical to successful completion of the case study but will enrich your learning experience. You should read an "Explore with an Expert" vignette if the topic interests you.

The following "Explore with an Expert" vignettes are available in the case study:
   G Diagnosis of Botulism (from Step 1, Page 2)
   G Laboratory Confirmation of Botulism (from Step 1, Page 11)
   G Which Study to Undertake First (from Step 2, Page 9)
   G Growth of *Clostridium botulinum* (from Step 5, Page 1)
   G Environmental Health Assessments (from Step 5, Page 2)
   G Recommending Control Measures (from Step 6, Page 2)

There are two ways to view the vignettes: from within the case study text and from the list of vignettes provided through the "Explore with an Expert" icon.

To view an "Explore with an Expert" vignette when it appears in the text of the case study, click on the blue underlined title of the vignette. You will temporarily leave the case study to go to the "Explore with an Expert" vignette. To move from page to page within the vignette, use the right and left arrows in the lower right-hand corner of the "Explore with an Expert" screen or press the *PageUp* or *PageDown* keys. You do not have to read the entire vignette and can return to the case study at any time. To return to the case study, click on "Back to Case Study" at the bottom right of the "Explore with an Expert" screen or press the *Esc* key.

At any point in the case study, you can access the "Explore with an Expert" vignettes by clicking with your mouse on the "Explore with an Expert" icon at the bottom of the case study screen. A colored notecard that lists each of the vignettes will appear. To select a vignette, click on the corresponding button. To return to the case study at the point you left, click on "Back to Case Study" at the bottom right of the "Explore with an Expert" screen or press the *Esc* key. The notecard will reappear. Click on "Back to Case Study" at the bottom right of the notecard or press the *Esc* key.

For the "Explore with an Expert" vignettes you have the option to play an audio recording of the text on the screen. To listen to the audio recording, click on the play button │ that appears in the lower left-hand corner of each "Explore with an Expert" screen. You must click on this button on each page of the vignette to hear the associated audio recording. If you have trouble with the audio, see "Frequently Asked Questions".
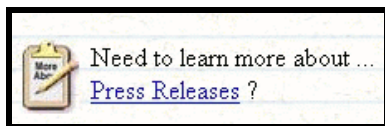
"More About" Lessons

"More About" lessons are provided for students with more limited knowledge and experience in epidemiology and public health. These lessons cover basic epidemiologic and public health concepts that must be mastered for successful completion of the case study. If you are unfamiliar with a topic (or are unable to answer the associated case study questions), you should read the "More About" lesson.

The following "More About" lessons are available in the case study:
   G Press Releases (from Step 1, Page 7)
   G Epidemic Curves (from Step 2, Page 4)
   G Writing Questions for an Epidemiologic Study (from Step 3, Page 6)
   G Analyzing Results of a Cohort Study (from Step 4, Page 1)
   G Factors Contributing to an Outbreak (from Step 5, Page 10)
   G Measures of Program Effectiveness (from Step 6, Page 9)

There are two ways to view the lessons: from within the case study text and from the list of lessons provided through the "More About" icon.

To view a "More About" lesson when it appears in the text of the case study, click on the blue underlined title of the lesson. You will temporarily leave the case study to go to the "More About" lesson. To move from page to page within the lesson, use the right and left arrows in the lower right-hand corner of the "More About" screen or press the *PageUp* or *PageDown* keys. To return to the case study, click on "Back to Case Study" in the lower right-hand corner of the "More About" screen or press the *Esc* key.

At any point in the case study, you can access the "More About" lessons by clicking with your mouse on the "More About" icon at the bottom of the case study screen. A colored notecard that lists each of the lessons will appear. To select a lesson, click on the corresponding button. To return to the case study at the point you left, click on "Back to Case Study" at the bottom right of the "More About" screen or press the *Esc* key. The notecard will reappear. Click on "Back to Case Study" at the bottom right of the notecard or press the *Esc* key.

Epi Info *
As a supplement to the case study, students can analyze data from the original investigation of "Botulism in Argentina" in Epi Info or examine Epi Info analyses performed by an experienced epidemiologist. These activities are not necessary for successful completion of the case study, but provide practice for students who are trying to learn skills in data analysis and programming.

The following items are available through the Epi Info tool:
- G Description of Epi Info Commands
- G Completed Epi Info 6 Analyses
- G Completed Epi Info 2000 Analyses
- G Run Epi Info 6, if already installed (Filename: C:\CB_3058\epiinfo\botulism.rec)
- G Run Epi Info 2000, if already installed (Filename: C:\CB_3058\epiinfo\botulism2000.mdb)
- G Download Epi Info Software from http://www.cdc.gov/epiinfo

To undertake Epi Info activities, click on the "Epi Info" icon at the bottom of the case study screen. A colored notecard listing the activities will appear. Click on the desired activity. If you wish to view a description of Epi Info commands or completed Epi Info analyses, you will need the Adobe Acrobat Reader. To analyze data in Epi Info, you will need Epi Info 6 or Epi Info 2000. You can download each of these software applications using the linkages provided on the colored notecard.

The files needed for the optional Epi Info activities can be accessed directly using Acrobat Reader to view the PDF (Adobe Portable Document Format) files and Epi Info to open the study database files. These files are located in the following folder: C:\CB_3058\epiinfo.

Epi Info commands and completed analyses
After you select the desired activity from the colored notecard, the Acrobat Reader will appear over the case study screen. The material to be reviewed will be displayed on the right side of the Acrobat Reader window. A list of commands/analyses will appear on the left side as bookmarks. For instructions on how to use the Acrobat Reader, see "Frequently Asked Questions" or view the help documentation available with your Acrobat Reader.

To return to the case study, close the Acrobat Reader window by clicking on the "x" in the uppermost right-hand corner of the window. You will see the colored notecard listing the Epi Info activities again. To return to the case study, click on "Back to Case Study" at the bottom right of the notecard or press the *Esc* key.

* If you installed the *Alternative Package* of this case study, you will not be able to access the epiinfo files. These files can be downloaded from the PHTN Case Studies website at http://www.phppo.cdc.gov/phtn/casestudies.

Analyzing data

"Botulism in Argentina" includes data from the original investigation undertaken in Buenos Aires in 1998. The study database has been modified, however, and includes no personal identifiers. The datafile is available in both an Epi Info 6 format and an Epi Info 2000 format.

To analyze data in Epi Info 6:
1. Select "Run Epi Info 6..." from the notecard. The Epi Info 6 main screen will appear.
2. Select "Analysis of data" under *Programs* on the main Epi Info 6 screen.
3. When the ANALYSIS screen appears, type "READ C:\CB_3058\epiinfo\botulism.rec" in the Commands box. "Dataset: C:\CB_3058\epiinfo\botulism.rec" will appear at the top of the screen.
4. Press the *F3* key to see a list of the variables included in the datafile. Press the *F2* key to see a list of the commands available in Epi Info.
5. Enter commands in the Commands box and view the output on screen.
6. To exit ANALYSIS, press the *F10* key.
7. To exit Epi Info, press the *F10* key again. This will return you to the notecard.
8. To return to the case study, click on "Back to Case Study" at the bottom right of the notecard or press the *Esc* key.
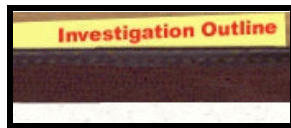
To analyze data in Epi Info 2000:
1. Select "Run Epi Info 2000..." from the notecard. The Epi Info 2000 main screen will appear.
2. Click on the *Analyze Data* button from the main Epi Info 2000 screen.
3. Three *Analysis* windows will appear. Commonly used Epi Info commands are listed on the left side of the screen. A modified version of the Microsoft Internet browser appears on the upper portion of the right side of the screen and the Epi Info Program Editor appears on the lower portion of the right side of the screen.
4. Click on *Read* from the list of commands on the left.
5. A dialogue box will appear. Click on the *Change Project* button in the lower left-hand corner of the dialogue box.
6. A second dialogue box will appear. In the pull down menu next to "Look in:" select the project name "C:\CB_3058\epiinfo".
7. Select the file name "botulism2000.mdb" and click on the *Open* button.
8. The first dialogue box will reappear. Select "viewbotulism2000".
9. Click on *OK*.
10. Wait for the following to appear on the Microsoft Internet browser screen:
    Current View: C:\CB_3058\epiinfo\botulism2000.mdb:
    Record Count: 21 (Deleted records excluded)
11. Input commands using the Epi Info Program editor or select them from the list on the left.
12. To exit *Analysis*, click on the *Exit* button in the upper left-hand corner of the screen above the list of commands.
13. To exit Epi Info, click on the *Exit* button on the main Epi Info 2000 screen. This will return you to the notecard.
14. To return to the case study, click on "Back to Case Study" or press the *Esc* key.

Investigation Outline
The Investigation Outline is a general listing of steps (and sub-steps) that can be used in the investigation of any foodborne disease outbreak. It is used in "Botulism in Argentina" to reinforce the need for a systematic approach to an outbreak investigation and to help you track your progress through the case study. (NOTE: The steps of the outline correspond to the six tabs in the case study notebook.)

The Investigation Outline shows your highest score for each step of the case study. These scores are based on your answers to the questions in that step. The scores are provided for your use only to see where you may need to do additional work.

You can access the Investigation Outline from any page of the case study notebook. Click on the edge of the yellow paper that appears from under the upper right-hand side of the case study notebook. To return to the case study, click on "Back to Case Study" at the lower right corner of the Investigation Outline or press the *Esc* key.

You can also access the Investigation Outline from the last page of each step of the case study by clicking on "Check Your Progress". In addition to seeing your score for the step, this action shows you the Investigation Outline and a summary of specific activities that occurred in the "Botulism in Argentina" investigation during that step. Students are encouraged to check their progress at the end of each step.

Epi Curve
The Epi Curve (i.e., Epidemic Curve) is a visual display of the "Botulism in Argentina" outbreak and investigation. It includes the dates the cases of botulism occurred, limited information about the outbreak, and notes of special events (e.g., implementation of control measures). The Epi Curve changes as the investigation unfolds and will help students understand the progression of events during an investigation. Students are encouraged to check the Epi Curve throughout the case study.

You can access the Epi Curve from any page of the case study notebook. Click on the edge of the Epi Curve graph paper that appears from under the lower right-hand side of the case study notebook. To return to the case study, click on "Back to Case Study" at the lower right corner of the Epi Curve or press the *Esc* key. If you would like to print the final Epi Curve for this outbreak and investigation, go to the Epilog and select Epi Curve. Click on the printer icon located at the lower left of the Epi Curve graph paper.

Other Features

Photos with additional information

Photos appear throughout the case study to enrich the student's understanding of events. These photos also add a touch of realism to the case study. To obtain additional information about the circumstances behind a photo, place your mouse over the photo.

Blue underlined text

Selected epidemiologic and public health terms used in the case study are blue and underlined. To obtain a definition of these terms, point to them with your mouse. You can also obtain definitions by clicking on the References icon and selecting the Glossary.

Printing screens

There is a *Print* button located in the top right corner of the case study screen. You may click on this button to print the current screen or press CTRL-P (i.e., press the *Ctrl key* and letter *P* key on your computer keyboard simultaneously).

Bookmarking and student data

So that you will not lose your place, the case study program has an automatic bookmarking feature that will keep track of the last page you visited in the case study notebook. When you exit and reenter the case study using your 4-digit sign-in number, you will be returned to the bookmarked page. The program also retains a record of all work completed on the case study including your answers to questions and highest score for each step (i.e., your DAT files).

A "student data" folder is created on your computer to store this information. It is called "C:\CB_3058studentdata". A sub-folder with a name matching your 4-digit sign-in number contains your DAT files (i.e., record of your work using that sign-in number).

Navigation Pointers

Moving from Page to Page
To move from page to page in the case study, click on the small arrows at the bottom right-hand corner of the case study notebook.
- Click on the right arrow ▶ to go to the next page.
- Click on the left arrow ◀ to go to the previous page.

You can also use the *PageDown* key on your computer keyboard to go to the next page or the *PageUp* key to go to the previous page.

Moving from Step to Step
To move from one step of the case study to another, click on the purple tabs that appear along the left or right side of the notebook. Clicking on a step tab will take you to the first page of that step. We strongly suggest that you DO NOT skip around the steps of the case study but complete them in numerical order.

Answering Questions
Periodically, you will need to answer questions in the case study. Follow the instructions that are provided with the questions (e.g., click on the answers with your mouse or use your keyboard to enter letters or numbers). Before you answer each question, feel free to review previous pages of the case study, references from under the References tool, "More About" lessons, "Explore with an Expert" vignettes, or other outside materials. You can also click on the "HINT" graphic (if available for that question) to see clues on how to answer the question.

Your answers will be marked with a "✔" (if correct) or an "✗" (if incorrect) and the correct answer will be highlighted in yellow. Additional feedback appears in red on the left side of the notebook or below the answer. For questions that involve multiple answers (e.g., drag-and-drop questions), you may have to click on the "CHECK YOUR ANSWER" graphic after you have finished answering the question to check and score your answers.

Once you enter an answer you cannot change it. You will be given the option at the end of each step to clear all of your answers and repeat the step.

Exiting the Case Study

If you wish to exit the case study, click on the *Exit* button in the lower right-hand corner of the case study screen. You will be asked "Are you sure you want to exit the case study?" If you are sure, click on "YES". If you decide not to exit the program, click on "NO". You will be returned to the case study.

You can only exit the case study from a page in the case study notebook. You cannot exit from one of the special tools or features (e.g., a "More About" lesson or the Epi Curve). If you are viewing a special tool or feature, click on "Back to Case Study" which appears in the lower right-hand corner until you again are on a page of the case study notebook. You can then click on the *Exit* button and exit the case study.

There have been occurrences when the computer screen "freezes" (i.e., does not seem to respond to keystrokes or use of the mouse). You may need to exit the case study to correct the problem. See "Frequently Asked Questions" for instructions.

Frequently Asked Questions

Taking the Course
How long does the case study take?
The required activities in the case study take about 3 hours to complete. Each of the six steps takes about 25 minutes. If you undertake any supplementary activities (e.g., read the "More About" lessons or "Explore with an Expert" vignettes, analyze the investigation database in Epi Info, or review articles included in the References tool), the case study will take you longer. These supplementary activities are optional. You are not required to do them, but they will enrich your learning experience.

Does the case study have to be completed in one session?
You do not have to complete the case study in one session. You can exit the case study at any time. An automatic bookmarking feature will keep track of the last page you visited in the case study notebook so that you will not lose your place. When you reenter the case study, you will be returned to the bookmarked page. The program will also retain a record of all completed work (i.e., "student data") including your answers to questions and your highest score for each step.

Although you can enter and exit the case study freely, we suggest that you complete the step you are working on before exiting. Exiting at the end of a step will allow you to understand the progression of activities in an outbreak investigation and better achieve the learning objectives.

How is the case study scored?
Each step of the case study is scored separately. No overall score (i.e., combining all steps) is computed. The score for a step equals the number of answers a student gets correct in that step divided by the total possible answers for that step. The score is provided as a percentage.

Total number of possible answers for each step is:
Step 1: 10   Step 4: 12
Step 2: 20   Step 5: 17
Step 3: 24   Step 6: 13

Will anyone see my scores?
The case study automatically records the number of answers you get correct and calculates the percentage correct for each step. You can view your score by clicking on "Check Your Progress" on the last page of each step.

The score is provided for your use only to see where you may need to do additional work. The score is NOT given to anyone else. It is not used to earn continuing education credits. It is not recorded on the certificate you receive at the end of the course. The only way for others to see your scores from the case study is to sign in on your computer using your 4-digit sign-in number.

Can a friend use my copy of the case study?
Your copy of the case study can be used by others in several ways:
  • Multiple students can use the same case study program on one computer. Each student should use a unique 4-digit sign-in number to allow tracking of their individual progress through the case study.
  • The same copy of the case study can be loaded onto other students' computers.
  • Because there is no copyright, you can also make copies of the case study and share them with colleagues and friends.

How can I get additional copies of the CD?
The Public Health Foundation (PHF), a self-supporting, non-profit organization, distributes "Botulism in Argentina" as partners in the Public Health Training Network with the Centers for Disease Control and Prevention. Additional copies of the CD can be purchased from PHF by calling 1-877-252-1200 or visiting their online bookstore at http://bookstore.phf.org.

Because there is no copyright, you can also make copies of the case study and share them with others.

How do I obtain continuing education credit?
To receive continuing education credit for completing the case study, go to the CDC/ATSDR Training and Continuing Education Online at http://www.phppo.cdc.gov/phtnonline and register as a participant. You will then need to register for the course (CB 3058) and complete the course evaluation and exam online. You will have to answer at least 70% of the exam questions correctly to receive credit. For more information about continuing education, call 1-800-41TRAIN (1-800-418-7246) or 404-639-1292.

The course has been approved for the following continuing education credits:
  • 3 CMEs (Continuing Medical Education)
  • 3.3 CNEs (Continuing Nursing Education)
  • 0.25 CEUs (Continuing Education Units)
  • 3 CECHs (Continuing Education Contact Hours)

Do I have to register for the course?
You do not have to register for the "Foodborne Disease Outbreak Investigation: Botulism in Argentina" course to obtain the case study or do it. You do have to register for the course if you wish to receive continuing education units.

Even if you are not interested in continuing education units, we encourage you to complete the course evaluation. To do this, go to http://www.phppo.cdc.gov/phtnonline and register as a participant. You will then need to register for the course (CB 3058) and complete the course evaluation. Your comments are valuable to us and will help us revise the case study or develop similar case studies in the future.

Do I have to listen to audio recordings?
You do not have to listen to the audio recordings of the "Explore with an Expert" vignettes. The recordings include the exact same text as appears on the screen. The recordings are provided for students who are audio learners and students for whom English is a second language. Students who are tired of reading text from the computer screen may also find the audio recordings appealing.

If you begin an audio recording but do not wish to listen to it, you can stop it at any time by clicking on the stop button **}** that appears in the lower left-hand corner of each "Explore with an Expert" screen. The audio recording will also stop if you move to the next page of the vignette.

Is the case study only for self-study?
Although designed to be self-instructional, "Botulism in Argentina" provides several options for use in the classroom setting. Classroom instructors can:
   • use explanations, descriptions, and examples from the case study to supplement their lectures and training exercises
   • have students work through the case study as a class exercise
   • have students do the case study as homework (or a test) to reinforce concepts covered in class

An instructor's guide is located at "C:\CB_3058\iguide.pdf". This file can also be downloaded from http://www.phppo.cdc.gov/phtn/casestudies. The guide includes ways the case study may be used in the classroom setting, additional background on epidemiologic concepts covered in the case study, and topics for further discussion with students.

Are there references to help me prepare for the case study?
"Principles of Epidemiology: An Introduction to Applied Epidemiology and Biostatistics" (Centers for Disease Control and Prevention, 1992) is an excellent reference covering basic epidemiologic principles, concepts, and procedures that are used in the surveillance and investigation of health-related events. Lesson 1 (Introduction to Epidemiology) and Lesson 6 (Investigating an Outbreak) of "Principles of Epidemiology" can be accessed through the case study References tool. For complete product information go to the Public Health Training Network: http://www.phppo.cdc.gov/phtn/catalog/3030g.asp. A copy of this product is also available on the CD format of "Botulism in Argentina".

Field Epidemiology (edited by Michael B. Gregg, Oxford University Press: New York, 1996) is a slightly more advanced epidemiologic reference. This text describes in simple and practical terms the distinct approach, tasks, and actions needed for successful epidemiologic field investigations and may be useful to some students.

Technical Issues
Can I run the case study from the CD?
You can run the case study directly from the CD. The experience will be the same as running the case study from the hard drive, but computer responses may be slower. To run the case study directly from the CD:
1. Insert the CD into your computer's CD drive.
2. Click on *Start* from your Windows desktop (located in the lower left-hand corner of your computer screen).
3. Click on *Run*.
4. Select *Browse* and click on the CD drive.
5. Select CB_3058 then "botulism.exe"

NOTE: When running the case study from the CD drive, you will need to access the Epi Info datafiles, "botulism.rec" and "botulism2000.mdb", directly from the "CB_3058/epiinfo" folder on the CD. The record of your work on the case study (i.e., your "student data") will be stored on your hard drive in the "C:\CB_3058studentdata" folder.

Can I run the case study on a Macintosh operating system?
No, you cannot run the case study on a computer with a Macintosh operating system.

Computer requirements for the case study include: Microsoft Windows 95, Windows 98, Windows NT® 4.0 with service pack 3 or higher, or Windows 2000; Intel Pentium processor or equivalent; 32 MB of available hard disk space; 16 MB of memory; 4x CD-ROM or faster; Monitor resolution of 800 x 600 with 16-bit color; and Mouse.

Can I use two different computers?
You can install the case study onto as many computers as you wish. For example, you can load the case study onto your work computer and complete Steps 1 and 2. You can then load the case study onto your home computer and work on Steps 3-6. However, if you use more than one computer to complete the case study, you cannot take full advantage of the bookmarking feature or storage of your completed work (e.g., your answers to questions and highest scores for each step completed) that automatically occur as you work through the case study. Each computer will recall only the work completed on that computer.

There is a way to overcome this inconvenience. When you "sign-in", a "student data" folder is created on your computer to store information about your work on the case study on that computer. This folder is called "C:\CB_3058studentdata". It contains a subfolder with a name matching your 4-digit sign-in number that contains your DAT files (i.e., record of your work using that sign-in number). If you wish to maintain one set of student data as you work through the case study on multiple computers, you will need to copy your data folder to a floppy diskette each time you change computers and then copy the data folder to the new computer. To be sure you copy all of the necessary files, copy the "C:\CB_3058studentdata" folder and its contents and save on a floppy disk.

Where can I download additional files for the case study?
If you selected the *Alternative Package* of "Botulism in Argentina", you downloaded only the minimum files needed to run the case study. You will not have the following files:
   • audio files that accompany the "Explore with an Expert" vignettes
   • reference documents such as those accessed through the References icon
   • Epi Info documents and study database files

If desired, these files can be downloaded from http://www.phppo.cdc.gov/phtn/casestudies. To work properly, be sure the files are saved to specific folders and sub-folders on your hard drive. Refer to "Program Structure and Files" to see where each of the additional files should be located.

Can I access other programs while running the case study?
To access other programs already running in Windows, press ALT-Tab (i.e., press the *Alt* key and hold it down while pressing the *Tab* key). A window will appear that shows the icon for each program that is currently running on your computer. Continue to depress the *Alt* key and tab through the programs using the *Tab* key until you get to the program you wish to view. The case study will continue to run until you return to it and exit.

NOTE: You can only access programs that are ALREADY running or available through your taskbar. To open a new program, you may have to exit the case study and open the program.

How do I listen to audio recordings?
To play the audio recordings you must click on the play button │ that appears in the lower left-hand corner of each "Explore with an Expert" vignette screen. You must click on this button on each page of the vignette to hear the associated audio recording.

If you click on the play button │, but still do not hear the audio, check the settings for your computer's speakers. If your computer does not support audio (i.e., has no speakers or sound card), disregard the play button.

If the play button │ does not appear, the program is unable to find the audio files. Check to see if the 22 Shockwave Audio (SWA) files are in the "CB_3058/audio" folder. See "Program Structure and Files" for specific filenames. If you downloaded the case study and installed the *Alternative Package*, you will not be able to access the audio files. These files can be down-loaded from the PHTN Case Studies website at http://www.phppo.cdc.gov/phtn/casestudies

How do I use the Adobe Acrobat Reader?
When you select a specific reference from the References notecard or examine Epi Info commands or completed analyses from the Epi Info notecard, the Adobe Acrobat Reader screen will appear over the case study screen. The material to be reviewed will be displayed on the right side of the Acrobat Reader window. The topics included in the material are listed on the left as bookmarks. Some of the topics have subtopics that will appear when you click on the "+" sign (or arrow) to the left of the main topic. To view a particular topic or subtopic, click on the title listed on the left. The display will jump to that topic or subtopic.

You can also use the *PageUp* and *PageDown* keys to move through the selected material. To go to the first page, press CTRL-HOME (i.e., press the *Ctrl* key and the *Home* key on your computer keyboard simultaneously). To go to the last page, press CTRL-END (i.e., press the *Ctrl* key and the *End* key simultaneously).

Why don't my linkages to run Epi Info work?
To analyze data in Epi Info while you are in the case study, click on the Epi Info icon at the bottom of the case study screen. A notecard will appear listing the available Epi Info activities. Select "Run Epi Info 6..." or "Run Epi Info 2000..." from the list of activities. The corresponding Epi Info main screen should appear.

If the selected Epi Info screen does not appear either: 1) you do not have the selected version of Epi Info loaded onto your computer or 2) it was installed to a directory other than the default directory used in the automatic installation process. The case study linkages to Epi Info assume that you have installed Epi Info onto the C: drive using the directories: *C:\Epi6* (for Epi Info 6) and *C:\Epi2000* (for Epi Info 2000). If you have installed Epi Info to another drive or directory, the linkage will not work. If you cannot use the ALT-Tab feature to access your Epi Info program (see "Can I access other programs while running the case study?"), you will need to exit the case study and run Epi Info independently. You should use the same filenames for the study database: C:\CB_3058\epiinfo\botulism.rec (for Epi Info 6) and C:\CB_3058\epiinfo\botulism2000.mdb (for Epi Info 2000).

If you do not have Epi Info 6 or Epi Info 2000 on your computer and would like to analyze data from the case study, go to http://www.cdc.gov/epiinfo/ to download the latest version.

How do I get started with Epi Info?

Analyzing data in Epi Info is relatively easy. The following information, however, will only help to get you started. If you are unfamiliar with Epi Info, you should visit the Epi Info website at http://www.cdc.gov/epiinfo/, download the Online Manual, and take the Guided Tour or Do Epi tutorial.

To analyze data from the original investigation, click on the Epi Info icon at the bottom of the case study screen. A notecard will appear listing the available Epi Info activities.

To analyze data in Epi Info 6:
1. Select "Run Epi Info 6..." from the notecard. The Epi Info 6 main screen will appear. [NOTE: The linkage from the notecard assumes that you have installed Epi Info 6 to the default directory C:\Epi6. If you have not installed it to this directory and cannot use the ALT-Tab feature to access your Epi Info program, you will have to exit the case study and run Epi Info 6 independently.]
2. Click on "Analysis of data" under *Programs* on the main Epi Info 6 screen.
3. When the ANALYSIS screen appears, type "READ C:\CB_3058\epiinfo\botulism.rec" in the Commands box. "Dataset: C:\CB_3058\epiinfo\botulism.rec" will appear at the top of the screen.
4. Press the *F3* key to see a list of the variables included in the datafile. Press the *F2* key to see a list of the commands available in Epi Info.
5. Enter commands in the Commands box and view the output on screen.
6. To exit ANALYSIS, press the *F10* key.
7. To exit Epi Info, press the *F10* key again. This will return you to the Epi Info notecard.
8. To return to the case study, click on "Back to Case Study" at the bottom right of the notecard or press the *Esc* key.

To analyze data in Epi Info 2000:
1. Select "Run Epi Info 2000..." from the notecard. The Epi Info 2000 main screen will appear. [NOTE: The linkage from the notecard assumes that you have installed Epi Info 2000 to the default directory C:\Epi2000. If you have not installed it to this directory and cannot use the ALT-Tab feature to access your Epi Info program, you will have to exit the case study and run Epi Info 2000 independently.]
2. Click on the *Analyze Data* button from the main Epi Info 2000 screen.
3. Three *Analysis* windows will appear. Commonly used Epi Info commands are listed on the left side of the screen. A modified version of the Microsoft Internet browser appears on the upper portion of the right side of the screen and the Epi Info Program Editor appears on the lower portion of the right side of the screen.
4. Click on *Read* from the list of commands on the left.
5. A dialogue box will appear. Click on the *Change Project* button in the lower left-hand corner of the dialogue box.
6. A second dialogue box will appear. In the pull down menu next to "Look in:" select the project name "C:\CB_3058\epiinfo".
7. Select the file name "botulism2000.mdb" and click on the *Open* button.

8. The first dialogue box will reappear. Select "viewbotulism2000".
9. Click on *OK*.
10. Wait for the following to appear on the Microsoft Internet browser screen:
    Current View: C:\CB_3058\epiinfo\botulism2000.mdb:
    Record Count: 21 (Deleted records excluded)
11. Input commands directly using the Epi Info Program editor or select them from the list on the left.
12. To exit *Analysis*, click on the *Exit* button in the upper left-hand corner of the screen above the list of commands.
13. To exit Epi Info, click on the *Exit* button on the main Epi Info 2000 screen. This will return you to the Epi Info notecard.
14. To return to the case study, click on "Back to Case Study" at the bottom right of the notecard or press the *Esc* key.

Trouble Shooting
What do I do if my screen freezes?
If your computer "freezes" (i.e., does not respond to keystrokes or use of the mouse), it could be that your computer is just a little slow. (This problem will be more common for students running the case study from the CD.) Do not enter any further commands for about 10 seconds.

If the computer remains frozen, you will need to exit and restart the program. You will not be able to exit normally and should use one of the following "emergency exit" techniques:
- Press CTRL-Q (i.e., press the *Ctrl* and *Q* keys on your computer keyboard simultaneously). The program will end immediately.
- Press CTRL-ALT-DELETE (i.e., press the *Ctrl*, the *Alt*, and the *Delete* keys on your computer keyboard simultaneously). This will bring up your computer's *Security* window. Click on *Task Manager*. Select "Botulism in Argentina" and click on <u>End Task</u>. The program will be shut down.

The above instructions will vary slightly depending on your operating system.

Sadly, if you need to use one of the above emergency exit techniques to close the case study, you will "lose" all of your work from that session. The automatic bookmarking feature will not record where you were when you shut down the program. Any answers entered during that session will not be stored. We apologize in advance for this inconvenience.

What do I do if my mouse becomes inactive?
If your mouse freezes but the case study is still running, use the *PageUp* or *PageDown* keys on your computer keyboard to move to a different step in the case study. Usually, the mouse will become active again. If the mouse does not become active, you will probably have to exit the case study and reenter it.

Because the mouse is frozen, you cannot exit normally but should use one of the following "emergency exit" techniques:
- Press CTRL-Q (i.e., press the *Ctrl* and *Q* keys on your computer keyboard simultaneously). The program will end immediately.
- Press CTRL-ALT-DELETE (i.e., press the *Ctrl*, the *Alt*, and the *Delete* keys on your computer keyboard simultaneously). This will bring up your computer's *Security* window. Click on *Task Manager*. Select "Botulism in Argentina" and click on <u>End Task</u>. The program will be shut down.

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What if my computer automatically installs applications to a drive other than the C drive?
The "Botulism in Argentina" case study will still run even if installed to a drive not labeled as the C drive.

Where do I go for Technical Support?
Technical support is available from the Public Health Foundation.
  Phone: (202) 898-5600
  Fax: (202) 898-5609
  E-mail: info@phf.org